

Universiti Teknologi MARA

**University Admission Selection
for SPM Leavers using
Rule-Based Expert System**

Intan Syazlinda Bt. Mohd Shahidon

**Thesis submitted in fulfillment of the requirements for
Bachelor of Science (Hons) Intelligence System
Faculty of Information Technology And
Quantitative Science**

April 2006

DECLARATION

I certify that this thesis and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline



.....

27 APRIL, 2006

INTAN SYAZLINDA BT MOHD SHAHIDON

2004218698

Acknowledgement

Firstly, I want to thank Allah s.w.t because of His almighty I can complete this final semester project. I also give my gratitude to Allah s.w.t because giving me the strength, ability and chances to accomplish this project accordingly.

My special thanks goes to my supervisor, Mr. Syed Ahmad Sheikh Aljunid, for his encouragement and utmost support in guiding me to complete this research paper successfully. Without his support and guidance I will not be able to carry out this project. My appreciation also goes to Pn. Zaidah Ibrahim, my thesis lecturer for all the information, guidance and opinions.

My appreciation also goes to my dearest friend, Norly Bt. Azman and colleagues. Thank you for all the supports and cooperation. Last but not least, thanks to all the resources for their cooperation in helping me in developing the system and accomplish this research.

TABLE OF CONTENTS

CONTENTS	PAGE
DECLARATION	ii
ACKNOWLEDGEMENT	iii
LIST OF FIGURES	vii
ABSTRACT	viii
CHAPTER 1 : INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Project Objectives	2
1.4 Project Significance	3
1.5 Scope of the Research	3
1.6 Summary	4
CHAPTER 2 : LITERATURE REVIEW	
2.1 Introduction	5
2.2 Expert System	5
2.3 Components of Expert System	6
2.4 Main Players in Expert System	7
2.5 Rule-Based Expert System	8
2.6 Inference Mechanism	9
2.7 Advantages of Rule-Based Expert System	11
2.8 Disadvantages of Rule-Based Expert System	11
2.9 Explanation of Decision Making Process	12
2.10 Similar Program	12

ABSTRACT

Entering higher educational institutions such as university is always being one's aim after the Malaysia Certification Examination. They will choose universities and programs they like, sometimes without taking into consideration the university and program requirements. The problems come to the universities where they need to choose and select qualified applicants among thousand of applications. This processes become harder when applicants do not consider the requirements. A system is needed to assist the administrators in selecting the qualified students. Consequently, the processes will be more systematic, efficient and reliable. University Admission Selection For SPM Leavers Using Rule-Based Expert System is an alternatives solution to the problems using Artificial Intelligence approach. This system can help processing the application and then produce output which is the list of qualified students for each program as a solution to the problem stated. A rule-based technique is chosen because the knowledge in this problem domain can be directly transformed into rules.